State Of California The Resources Agency of California

Memorandum

Date: February 21, 2001
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To: Commissioner Robert Pernell, Presiding Member
Commissioner, William J. Keese, Associate Member

From: **California Energy Commission** - James W. Reede, Jr.
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Subject: **EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14)**
ISSUES IDENTIFICATION REPORT

Attached is the staff's Issue Identification Report for the El Segundo Power Redevelopment Project proposal (00-AFC-14). This report serves as a preliminary scoping document that identifies the issues that the Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Siting Committee's scheduled Informational Hearing on March 1, 2001, at the El Segundo City Hall located at 350 Main Street in El Segundo, California.

cc: Docket (00-AFC-14)
Proof of Service List

Attachment

JWR:jr El Segundo Issues Report

EL SEGUNDO POWER REDEVELOPMENT PROJECT

(00-AFC-14)

February 21, 2001

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Energy Facilities Siting and Environmental Protection Division

ISSUE IDENTIFICATION REPORT
EL SEGUNDO POWER REDEVELOPMENT PROJECT
(00-AFC-14)

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ISSUES IDENTIFICATION REPORT

California Energy Commission Staff

PURPOSE

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of our discussions with federal, state, and local agencies, and our review of the El Segundo Power Redevelopment Project Application for Certification (AFC), Docket Number 00-AFC-14. The Issue Identification Report contains a project description, summary of potentially significant environmental issues, and a discussion of the proposed project schedule. The staff will address the status of issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On December 21, 2000, EL Segundo Power II LLC (ESP II), filed the an Application for Certification (AFC) seeking approval from the California Energy Commission to replace the existing El Segundo Generating Station (ESGS) Units 1 and 2 in the City of El Segundo with a natural gas-fired, combined cycle electric generation facility.

The existing ESGS Units 3 and 4 located adjacent to Units 1 and 2 will not be modified by this project. The new combined cycle facility is expected to generate 630 megawatts (MW) under nominal conditions. This is 280 MW more than the old Units 1 and 2 were capable of generating when operating. The project includes demolition and removal of the existing Units 1 and 2 and their replacement with Units 5, 6, and 7 in the location previously occupied by Units 1 and 2.

The project will use Selective Catalytic Reduction (SCR); a dry, low NOx combustor and an oxidation catalyst system to reduce air emissions. An ammonia pipeline will be installed into the directly adjacent Chevron marine terminal property to deliver ammonia to the site for SCR.

The new units will use the existing seawater cooling system without modifying the intake or outfall structures and lines, and without modifying the flow rates and capacity.

New connections to the existing adjacent SCE-owned 230 kilovolt (kV) switchyard will be added as part of the proposed project. No new transmission lines will be built.

New pipelines include two water supply lines occupying a single trench in El Segundo city streets and a sanitary discharge pipeline within Manhattan Beach City streets.

The project is estimated to have a capital cost of approximately $350-400 million. The applicant plans to complete construction and start operation of the combined-cycle unit in 2003. During construction, up to approximately 422 construction jobs will be created over

the 20-month construction schedule. A permanent professional workforce of approximately 50 people will operate the plant.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report might not include all of the significant issues that may arise during the case. Discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report is based on our judgement and comments of other government agencies of whether any of the following circumstances will occur:

- Potential significant impacts which may be difficult to mitigate;
- Potential areas of noncompliance with applicable laws, ordinances, regulations or standards (LORS);
- Areas of conflict or potential conflict between the parties; or
- Areas where resolution may be difficult or may affect the schedule.

The following table lists all the subject areas evaluated and notes those areas where critical or significant issues have been identified. Even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area.

For example, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops or even subsequent hearings. However, we do not currently believe such an issue will have an impact on the schedule or that resolution will be difficult to achieve.

Major Issue	Subject Area	Major Issue	Subject Area
Yes	**Air Quality**	No	Paleontological Resources
Yes	**Biological Resources**	No	Public Health
No	Cultural Resources	No	Socioeconomics
No	Efficiency and Reliability	No	Soils
No	Electromagnetic Fields & Health Effects	No	Traffic and Transportation
No	Facility Design	No	Transmission Line Safety
No	Geology	No	Transmission System Engineering
No	Hazardous Materials	**Yes**	**Visual Resources**
No	Industrial Safety and Fire Protection	No	Waste
No	Land Use	**Yes**	**Water Resources**
No	Project Overview	No	Alternatives
No	Noise		

This report does not limit the scope of staff's analysis throughout this proceeding, but acts to aid in the analysis of potentially significant issues that the ESGS proposal poses. The following discussion summarizes each potential issue, identifies the parties needed to resolve the issue, and where applicable, suggests a process for achieving resolution. At this time, staff does not see either of these potential issues as non-resolvable.

AIR QUALITY

Staff sees two major air quality issues that could affect the El Segundo Power Redevelopment Project schedule. First, the complete securing and appropriate verification and analysis of all necessary Emissions Reduction Credits (ERCs). Second is the determination of the Best Available Control Technology (BACT) for the project. Both issues could result in significant project delays if not addressed immediately. It is especially critical to the resolution of these issues that the Applicant provide staff with sufficient detailed information to complete an analysis.

Emission Reduction Credits

The Applicant has proposed a number of innovative approaches to secure ERCs for the project. However, due to the highly competitive nature of the ERC market, this information has been submitted confidentially. Since these sources and approaches are confidential, it will be difficult for staff to independently research and verify these potential ERCs. In order for the South Coast Air Quality Management District (SCAQMD) to complete its analysis to issue a Preliminary Determination of Compliance (PDOC), the Applicant needs to expedite the exploration of these confidential ERC sources and provide staff with more extensive information (either confidential or non-confidential), as it becomes available.

A portion of the necessary ERCs for the El Segundo Power Redevelopment project remains inadequately identified. It is staff's experience that this issue can be a significant cause of delay. In order to minimize the potential impact of this issue, the Applicant needs to expedite the identification and acquisition of suitable ERCs.

The applicant has submitted estimates of minority populations near the project site based on the 1990 census data. It has been staff's experience that this data is unacceptably inaccurate for the purposes of determining environmental justice impacts. Staff will use the 2000 census data to determine the location of minority populations near the project site. There is a possibility that air quality impact mitigation measures will be required to be localized to mitigate impacts on a specific minority population near the project site.

Best Available Control Technology for the Combustion Turbines

The Applicant provided in their Application for Certification (AFC) a Best Available Control Technology (BACT) analysis. However, that analysis provides only an evaluation of regulatory documents and selective catalytic reduction (SCR) technology. Based on comments on similar electrical generation projects, the U.S. Environmental Protection Agency (EPA) will likely require that the Applicant prepare a detailed economic feasibility study in addition to the regulatory evaluation provided, and consider alternative

technologies such as SCONOx. Staff will be working with the Air District, Applicant and the EPA during the Discovery and Analysis Processes to resolve these issues.

BIOLOGICAL AND WATER RESOURCES

The most significant direct effect on coastal resources due to current and proposed facility operations appears to be the ongoing mortality of marine species due to the facility's ocean water intake and discharge system. The main reasons for the mortality are entrainment and impingement caused by water intake and thermal discharges from the facility, including heat treatment used to clear marine organisms from the intake pipe.

The current and proposed project operations would require intake and discharge of approximately 206 million gallons per day (mgd), resulting in entrainment and impingement of numerous marine species. While the proposed redevelopment would result in a more effective use of ocean water (i.e., increased power production while using the same amount of ocean water for cooling), it would also continue the ongoing unmitigated loss of marine resources that is occurring under current operations.

Information provided in the AFC largely compares proposed project impacts to the existing ESGS operations and states that impacts will be the same or will decrease. By describing existing levels of the facility's impacts as the baseline, we are not provided adequate understanding of the full effect of current operations on the various affected marine species, nor are we able to adequately determine alternatives that may be available and necessary to avoid, reduce, or compensate for these impacts. This is of further concern given that the findings regarding entrainment and impingement effects of the ocean intake are based largely on a 316(b) study done in the 1982 for another nearby coastal power plant (Scattergood), along with some more recent monitoring data obtained in 1997 showing ongoing effects to marine species. It is not likely that the methodologies and findings of this nearly twenty-year old study are adequate to review the impacts of the current or proposed facility operations, given the developments in sampling techniques and methodologies, increased understanding of marine ecosystems, and other scientific advances that have occurred in the past several decades.

Our concerns are increased given the existing conditions of Santa Monica Bay. As described in the AFC, "(the biological community in Santa Monica Bay has been identified as being imbalanced, severely stressed, or known to contain toxic substances in concentrations that are hazardous to human health." (p. 5.5-11). Additionally, Santa Monica Bay is described as impaired on the current 303(d) list due to levels of mercury, cadmium, copper, lead, nickel, silver, zinc, chlordane, DDT, and PCBs. The AFC does not adequately describe the cumulative impacts of current or proposed ESGS operations when evaluated alongside these other above-mentioned impacts.

TRANSMISISON SYSTEM ENGINEERING ISSUE

Staff has not completed its analysis of the proposed El Segundo Power Redevelopment Project and has not concluded that there are potentially significant impacts in the area of Transmission System Engineering. The Transmission System Impact Study received by the Commission on February 9, 2001 identifies that the Southern California Edison Company's transmission system is not adequate to accommodate the project without line overloads. If mitigation or congestion management is not approved by the California Independent System Operator, remedial action schemes or physical upgrades will be required to accommodate the project power. Physical upgrades or remedial action schemes (RAS) approved by the ISO will be required to mitigate overloads on six 230 kV lines. A Facilities Study will be needed to determine the need for physical upgrades or RAS to alleviate the overloads on at least sixteen other 230 kV lines.

When the Facilities Study becomes available staff will assess the options for mitigation along with ISO recommendations that could avoid or reduce the need for physical upgrades. If physical upgrades are required to be made to the Southern California Edison transmission system, the Energy Commission must identify and evaluate the environmental effects of construction and operation of any new or modified transmission facilities beyond the project's interconnection with the existing transmission system that result due to the power plant addition.

VISUAL RESOURCES

The proposed ESGS project has the potential to cause or substantially contribute to adverse visual impacts due to visible vapor plumes from the plant exhaust stacks. This is due to the high numbers of sensitive viewers in the foreground vicinity of the proposed project. These viewers include recreationists at Dockweiler and Manhattan Beach State Parks, motorists on the Pacific Coast Highway, and residents at foreground and middleground distances from the proposed project in the communities of El Segundo and Manhattan Beach. This issue is of concern and warrants further study. However, without data on existing and proposed vapor plumes, staff is unable to determine if in fact a significant adverse effect could occur. Quantitative modeling of existing and predicted plume occurrence is needed to conduct such an evaluation. Determinations of visual impact from vapor plumes would be based on criteria of both plume magnitude and plume frequency. If adverse impacts were identified, they could be mitigated with available measures and existing technology.

Applicant's discussion of project compliance with applicable local coastal programs and other relevant policies and goals of the affected communities is inadequate. The existing plant represents a prominent existing adverse visual impact in the scenically sensitive

coastal zone. The proposed plant could continue or intensify this adverse influence on the scenic resources of the coastal zone. Applicant has proposed landscape screening measures which potentially address such concerns in part. Specific architectural and landscape screening and other measures such as power plant color and surface treatment, could help to ensure conformance with local policies and are acceptable to the affected communities, must be developed and incorporated into the project's conditions of certification.

The proposed project could potentially increase the apparent bulk, height and massing of the facility as seen from various sensitive viewpoints in comparison to the Unit 1 and 2 structures that it would replace. Such a change could represent an adverse visual impact to sensitive viewers on both the Pacific Coast Highway and adjacent beaches. As discussed above, staff is preparing additional requests for information regarding potential architectural and landscape design treatments, siting and layout alternatives, or other measures that might mitigate adverse impacts that are identified.

SCHEDULING

Timely provision of the ERCs is critical to the schedule of this project. These must be provided by April 15, 2001, to allow the SCAQMD to prepare their PDOC on time.

Resolution of the biological and water issues may also impact the schedule if entrainment or impingement studies are required.

The Energy Commission is currently reviewing 16 Applications for Certification for power plant projects, an SPPE and expects to receive another 3 AFC's in the next two months. Staff is experiencing a significant staffing workload problem and has recently hired a consultant team to help with the peak workload. In light of the issues and the workload staff believes that it will be challenging to meet a 12-month schedule. Staff's proposed 12-month schedule is attached. However, if issues are resolved quickly, staff will attempt to complete its analysis ahead the proposed schedule.

PROPOSED SCHEDULE

EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14)

DATE	EVENT
12/20/00	El Segundo Power Redevelopment Project AFC Filed
2/07/01	Energy Commission Deems AFC Complete
2/23/01	Staff Files Issue Identification Report
3/01/01	Information Hearing, Issue Scoping and Site Visit
3/05/01	Staff Files Data Requests
3/14/01	Data Request Workshop
4/05/01	Data Responses Due from Applicant
4/05/01	All ERC documentation due to SCAQMD
4/16/01	Cal ISO files recommendations regarding Transmission Line Interconnection Study
4/30/01	SCAQMD Files Preliminary Determination of Compliance
5/21/01	Coastal Commission Input
6/30/01	Staff Files Preliminary Staff Assessment (PSA)
7/06/01	SCAQMD Files Final Determination of Compliance (DOC)
8/30/01	Staff Files Final Staff Assessment (FSA)
9/14/01	Start Hearings
9/17/01	Conclude Hearings
10/30/01	Committee issues Presiding Member's Proposed Decision (PMPD)
11/15/01	Committee Conference on (PMPD)
12/19/01	Adopt Decision on PMPD